PHILIPS

Philips Medical Systems

Handswitch

9890 000 02941
9890 000 02492
9890 000 02932

Level 0 Documentation

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SERVICE MANUAL – UNIT 742

Author: G. Kramm

In case there are any questions concerning this manual,
please send this LOPAD via fax to 49/(0)40/5078 2481

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List of pages and drawings (LOPAD)

Manual Order No: 4512 988 00041
released: 04/2005

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Z-1	(05.1)

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1. Introduction and technical data

1.1. Purpose of manual

This manual describes the handswitch delivered with or for generators like Medio CP (H), SCP and new generator types like OPTIMUS RAD / RF, Optimus C etc.

1.2. Items supplied

The Handswitch consists of:
9890 000 0294. Handswitch, standard AMP connectors
9890 000 0249. Handswitch including OPTIMUS RAD / RF adapter.
9890 000 0293. Handswitch including OPTIMUS C adapter.

1.3. Compatibility

The Handswitch is compatible with 24V release circuit.

1.4. Technical data

1.4.1. Mechanical data

Crate / Box	**Dimension (mm)**			**Weight (Newton)** (10 N = 1 Kg)
	Length	Width	Height	
Packed	xxx	xxx	xxx	xxx
Transport	xxx	xxx	xxx	xxx
Installed	64	46	80	4

1.4.2. Environmental data

	Operation	**Stock / Transport**
Temperature in °**Celsius**	0 / + 40	- 40 / + 75
Temperature in °**Celsius / Hour**	N / A	N / A
Humidity in % (non-condensing)	5 / 95	5 / 95
Gradient in % **/ hour**	N / A	N / A
Vibrations / Shock range in **Hz**	5 - 500	5 - 500
Vibrations / Shock amplitude in **mm**		
Vibrations / Shock acceleration in **g**	0.25 peak	1.0 peak
Shock acceleration in **g**	5 peak	30 peak
Shock pulse duration in **msec**	11	11
Air pressure in **Hecto-pascal**	700 / 1100	700 / 1100

Acoustic noise level : N / A
Air cooling : N / A
EMC : IEC 950

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1.4.3. Electrical data

Equipment related:

Power required	:	N / A
Nominal voltages	:	24 VDC
Nominal current	:	0.5 A
Nominal frequency	:	N / A
Heat emission		
standby	:	N / A W (1 Joule/sec = 1 Watt)
in operation	:	N / A W (1 Joule/sec = 1 Watt)

1.4.4. Tools/material required

Pre-installation

Delivered	:	N / A
To be ordered	:	N / A
To be arranged locally	:	N / A

Installation

Delivered	:	N / A
To be ordered	:	N / A
To be arranged locally	:	TC129 Tool kit, standard

1.4.5. Remote service data

N / A.

1.4.6. Transport data

N / A

1.4.7. Pre-installation requirements

N / A

1.4.8. Pre-installation data

N / A

1.5. Safety information

The general legal and factory safety recommendations for this X-ray equipment and the following recommendations must be strictly observed!
Start of operation and maintenance work and, especially, electrical work must only be executed by authorized persons.

Warning!

The system / component must be switched OFF during replacement work. Any X-ray unit produces ionizing radiation which may be harmful if not properly controlled. Therefore, it is recommended that this equipment be operated in accordance with the guidelines set down by the national council on radiation protection.

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1.6. Compliance information

N / A

1.7. Equipment identification and labeling

The label which contains information about code number (12NC) and serial number is located on the cable at free connectors end.

1.8. Abbreviations and definitions

Abbreviation	Explanation
PMS	Philips Medical Systems
POST	Power On Self Test
BIST	Build In Self Test

1.9. Manual history

Date	Version	Name	Reason of changes
12.02.2004	1.0	G. Kramm	Initial new document

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2. Installation

2.1. Introduction, tools room check

N / A

2.2. Unpack, transport, mount

N / A

2.3. Installation

Make sure to install the cable clamp or cable tie as cord grip close to the cable connnector.

2.4. Setting-to-work

N / A

2.5. Performance check

N / A

2.6. Handover preparation

N / A

2.7. Options

N / A

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3. Fault finding

3.1. Fault isolation procedure

N / A

3.2. User messages

N / A

3.3. Logging

N / A

3.4. Indicators and measuring points

N / A

3.5. Test facilities

N / A

3.5.1. POST

N / A

3.5.2. BIST

N / A

3.5.3. Functional test

Switch Preparation and Exposure to check Handswitch functionality.

3.5.4. Performance test

N / A

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4. Replacements

4.1. Replacement procedure

4.1.1. Handswitch

Tools required	TC129 Tool kit, standard
Time/manpower	0.25 h / 1 engineer
Preconditions	N / A

Replacement procedure

- Disconnect the Handswitch
- Unpack the new Handswitch
- Connect the new Handswitch according drawing Z-1

5. Adjustments

N / A

6. Programmings

6.1. Hardware

N / A

6.2. Software

N / A

7. Acceptance

N / A

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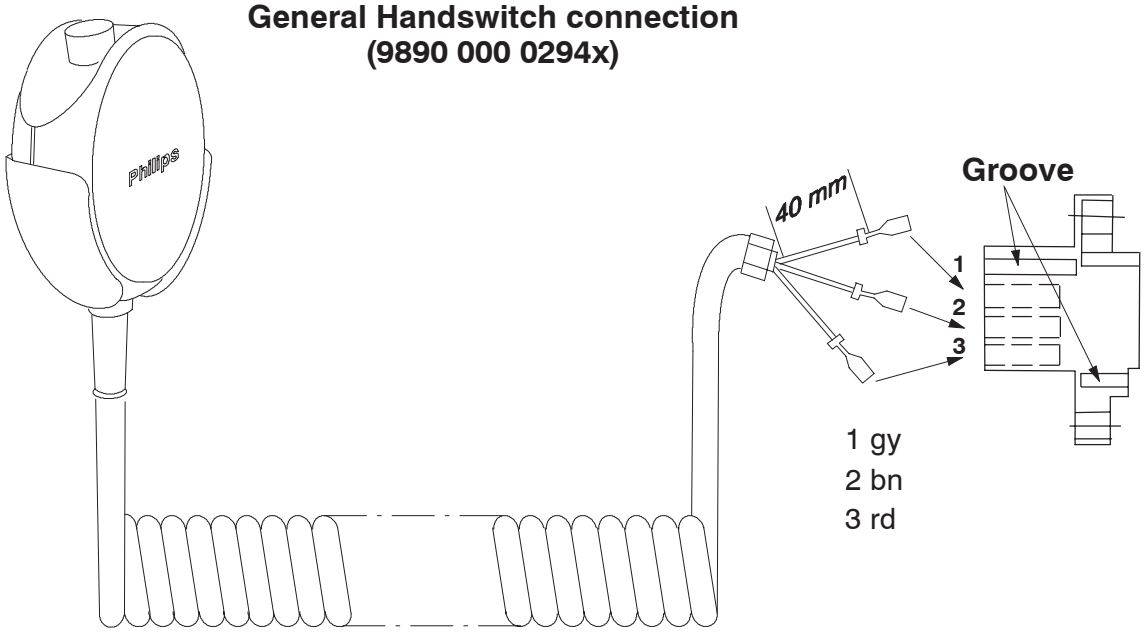
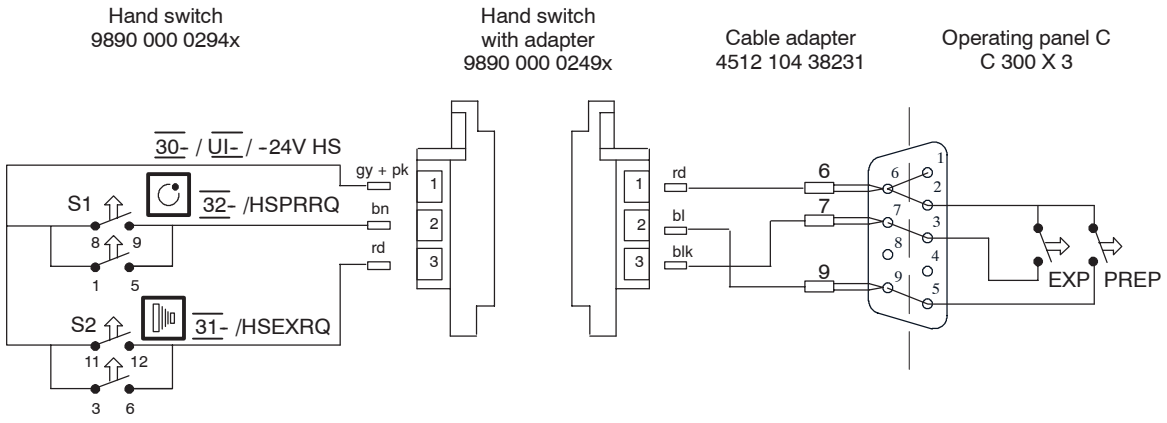
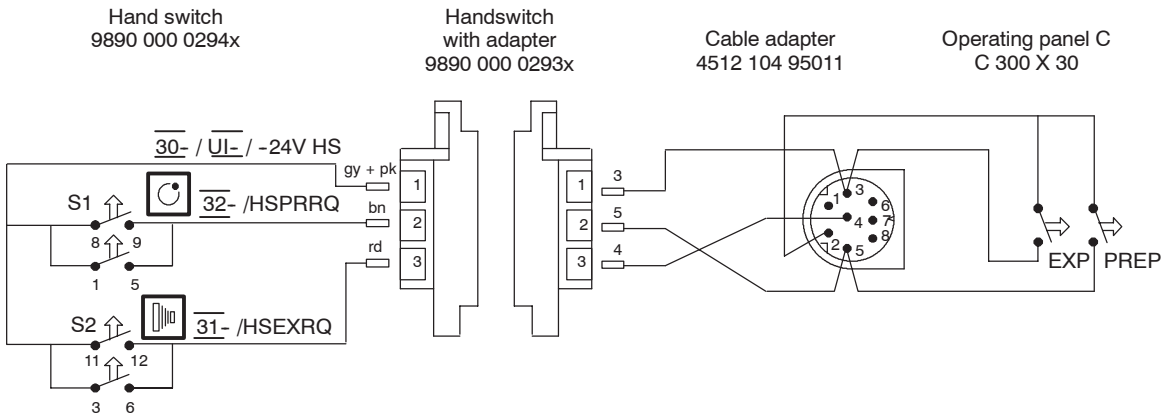
General Handswitch connection (9890 000 0294x)



OPTIMUS RAD + R / F



OPTIMUS C



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Handswitch Z1 051

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